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Attorneys for Plaintiff

**IN THE UNITED STATES DISTRICT COURT**  
**FOR THE DISTRICT OF OREGON**  
**PENDLETON DIVISION**

**OREGON NATURAL DESERT ASS’N,**

No. 2:23-cv-01898

Plaintiff,

**FIRST AMENDED COMPLAINT**

v.

**FRANK KENDALL III**, in his official  
capacity as the Secretary of the U.S.  
Department of the Air Force, and **U.S.**  
**AIR FORCE**,

Defendants.

**(Environmental Matter)**

### **NATURE OF ACTION**

1. The Owyhee Canyonlands are a national treasure, featuring miles upon miles of deep rugged canyons and rolling sagebrush steppe. This vast and largely wild landscape supports a diversity of fish and wildlife and preserves some of the darkest night skies in the country. It is an area rich with history and full of wonder, as inviting as it is foreboding, and one that deserves the highest levels of protection now and forever. Oregon Natural Desert Association (“ONDA”) has been working for decades to protect, defend, and restore this unique and fragile landscape.

2. ONDA brings this case to stop the U.S. Air Force from unlawfully discharging chaff and flares from aircraft during training exercises into waters of the United States in the Mountain Home Air Force Base’s (“AFB”) Paradise North Military Operations Area. The Air Force has never obtained a required permit for these ongoing discharges, despite the clear and unambiguous requirements of the Clean Water Act (“CWA”), 33 U.S.C. §§ 1251 *et seq.*, and the fact that the metals and other materials in the chaff and flares are toxic to native fish in the Owyhee river system, including Lahontan cutthroat trout, bull trout, and redband trout.

3. This action is a citizen suit brought under section 505 of the CWA, 33 U.S.C. § 1365. ONDA seeks: (1) a declaratory judgment that Frank Kendell III, in his official capacity as the Secretary of the U.S. Department of the Air Force, and the U.S. Air Force (collectively, “U.S. Air Force”) have violated and continue to be in violation of section 301(a) of the CWA, *id.* § 1311(a), by discharging pollutants from aircraft into waters of the United States, including the Owyhee Wild and Scenic Rivers and their tributaries; (2) an order directing the Air Force to suspend or limit its training operations in the Paradise North Military Operations Area unless and until the agency secures a National Pollutant Discharge Elimination System (“NPDES”) permit from the State of Oregon or other authorized NPDES permitting agency; and (3) an order that the

Air Force pay ONDA's reasonable litigation costs and attorney and expert fees related to this action.

### **JURISDICTION AND VENUE**

4. This Court has subject matter jurisdiction over ONDA's claims under section 505(a) of the CWA, 33 U.S.C. § 1365(a), 28 U.S.C. § 1331 (federal question), and 28 U.S.C. § 1346(a)(2) (United States as Defendant). Section 505(a) and (d) of the CWA, 33 U.S.C. § 1365(a) and (d), authorizes the requested relief. The requested relief is also proper under 28 U.S.C. § 2201 (declaratory relief) and 28 U.S.C. § 2202 (injunctive relief).

5. Section 505(a) of the CWA, 33 U.S.C. § 1365(a), waives the Air Force's sovereign immunity for ONDA's claims.

6. In accordance with section 505(b)(1)(A) of the CWA, 33 U.S.C. § 1365(b)(1)(A), and 40 C.F.R. § 135.2, ONDA notified the Air Force of its CWA violations and of ONDA's intent to sue by letters dated April 10, 2023, and August 16, 2023 ("Notice Letters"). Copies of the Notice Letters are attached to this Amended Complaint as Exhibit 1. In accordance with section 505(b)(1)(A) of the CWA, 33 U.S.C. § 1365(b)(1)(A), and 40 C.F.R. § 135.2(a)(3), ONDA provided copies of the Notice Letters to the Administrator of the United States Environmental Protection Agency ("EPA"), the Regional Administrator of Region 10 of the EPA, the Attorney General of the United States, and the Director of the Oregon Department of Environmental Quality ("DEQ").

7. As of the filing of the initial Complaint on December 15, 2023, the Air Force had not yet responded to either of ONDA's Notice Letters.

8. At the time of the filing of the initial Complaint on December 15, 2023, more than 60 days had elapsed since the Notice Letters were served and the violations complained of in the

Complaint and this Amended Complaint were at that time, and are now, continuing. Neither EPA nor the state of Oregon had commenced any action constituting diligent prosecution to redress the Air Force's violations at the time the initial Complaint was filed on December 15, 2023.

9. The sources of the violations complained of are located in Malheur County, Oregon, and venue is therefore appropriate in the District of Oregon under section 505(c)(1) of the CWA, 33 U.S.C. § 1365(c)(1).

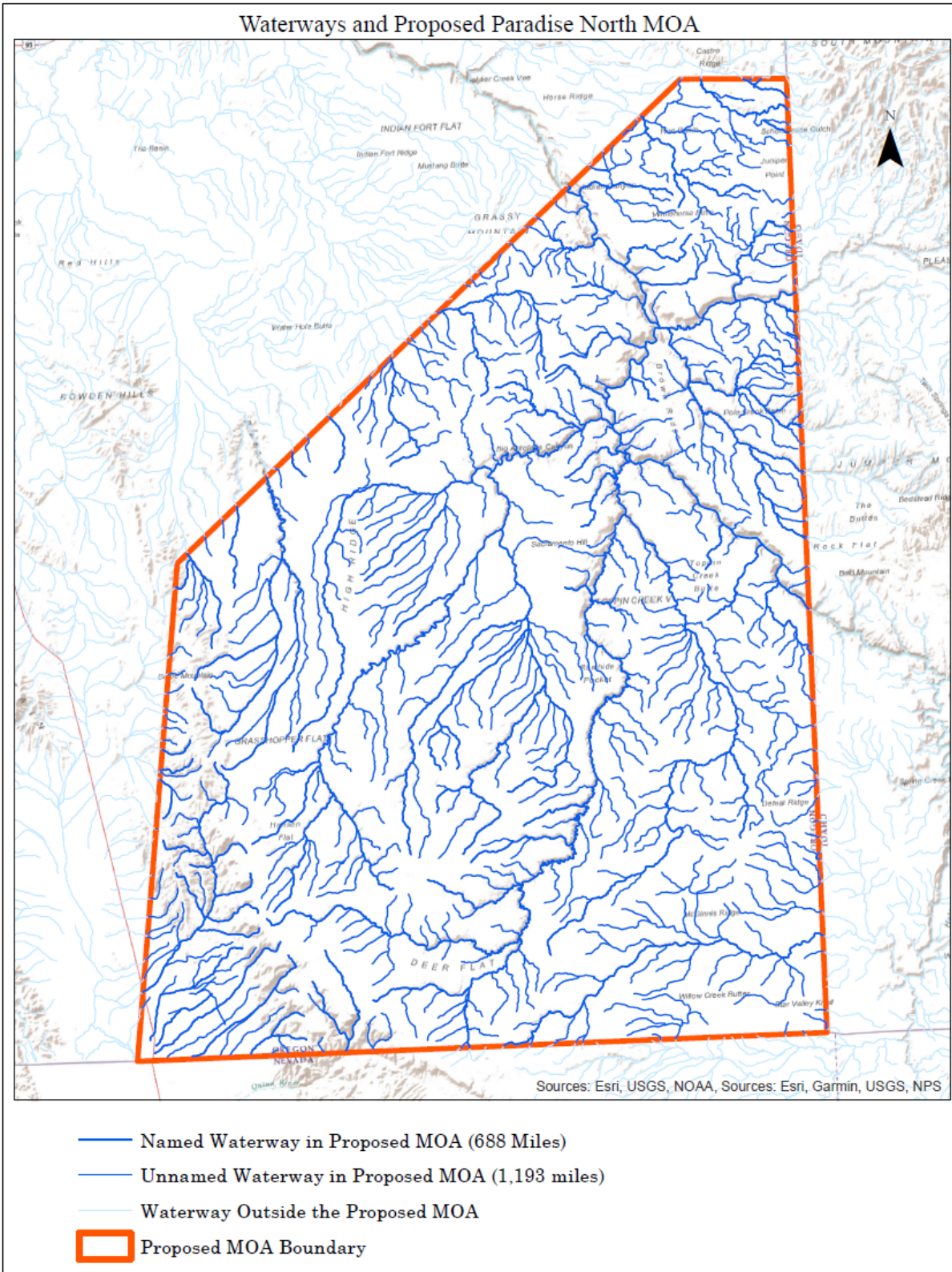
### **PARTIES**

10. Plaintiff OREGON NATURAL DESERT ASSOCIATION ("ONDA") is an Oregon non-profit, public interest organization of about 18,000 members and supporters. It has offices in Portland, Oregon and Bend, Oregon. ONDA's mission is to protect, defend, and restore forever Oregon's high desert for present and future generations. ONDA actively participates in Air Force and Department of the Defense decision-making processes concerning or affecting public lands and waters in eastern Oregon. ONDA brings this action on its own behalf. ONDA also brings this action on behalf of its members and staff, and it has at many members that have regularly enjoyed and will continue to enjoy the public lands, waters, and resources that are adversely affected by the Air Force's discharges, for educational, recreational, spiritual, scientific, and other activities. ONDA has been active in monitoring ecological conditions and wilderness values on public lands affected by the Air Force's training activities in eastern Oregon, including throughout the greater Owyhee region. ONDA also participated throughout the public processes that led to the Air Force's release in 2023 of a Final Environmental Impact Statement and Record of Decision for the agency's proposal to "optimize" air space by allowing dramatically more intensive training activities throughout the Paradise North training area in southeastern Oregon. ONDA and its members also participate in

information gathering and dissemination, education and public outreach, participating in agency planning processes, and other activities relating to the Air Force's activities on, over, or otherwise affecting the public lands and waters in the Paradise North Military Operations Area.

11. ONDA has representational standing to bring this lawsuit. ONDA has many members who reside and/or recreate in Oregon near the waters affected by the Air Force's illegal discharges of pollutants, and who have reasonable concerns about the adverse impacts to the waterbodies, named and unnamed, throughout the Paradise North Area, harming their aesthetic, educational, recreational, spiritual, scientific, and other interests in the waterbodies and environment throughout the Paradise North Area.

12. On information and belief, the Air Force discharges pollution from aircraft into waterbodies, named and unnamed, throughout the Paradise North Military Operations Area and/or the discharges adversely impact all waterbodies, named and unnamed, throughout the Paradise North Military Operations Area. Some of the major waterbodies in the Paradise North Area are: the Owyhee River, the West Little Owyhee River, the North Fork Owyhee River, the Middle Fork Owyhee River, Antelope Creek and/or Big Antelope Creek, Toppin Creek, Pole Creek, Tent Creek, Rattlesnake Creek, Field Creek, Little Rattlesnake Creek, Jack Creek, Steer Canyon, and Dry Creek. The map below shows the Paradise North Military Operations Area, and it identifies most or all of the waterbodies in the Paradise North Area that the Air Force discharges pollution into and/or adversely impacts. Most or all of these waterbodies are also identified in the table attached as Exhibit 2, which is incorporated by this reference.



13. These waterbodies adversely impacted by the Air Force's discharges are described in more detail below, on pages 16 to 17.

14. Many of ONDA's members regularly use and enjoy, and intend to continue to use and enjoy, the waters and surrounding public lands and natural resources throughout the Air Force's Paradise North Military Operations Area that are adversely impacted by the Air Force's unlawful discharges, for recreational, scientific, spiritual, educational, aesthetic, and other purposes. Many of ONDA's members regularly enjoy fishing, rafting, hiking, camping, hunting, bird watching, study, contemplation, photography and other activities in and around the public lands and waters that are adversely impacted by the Air Force's illegal discharges. ONDA has members that, collectively, use waterbodies and tributaries throughout the Paradise North Military Operations Area, including but not limited to the Owyhee River, the West Little Owyhee River, the North Fork Owyhee River, the Middle Fork Owyhee River, Antelope Creek and/or Big Antelope Creek, Toppin Creek, Pole Creek, Tent Creek, Rattlesnake Creek, Field Creek, Little Rattlesnake Creek, Jack Creek, Steer Canyon, and Dry Creek. These members that use and enjoy the waterbodies throughout the Paradise North Military Operations Area have environmental, health, aesthetic, scientific, recreational, and other interests that have been, are being, and will be adversely affected by the Air Force's illegal discharges of pollutants and by ONDA's members' reasonable concerns related to the effects of the discharges. These members are further concerned that, because the Air Force's discharges into waterbodies throughout the Paradise North Area are not subject to an NPDES permit(s) as required by the CWA, there are not sufficient restrictions imposed upon, and monitoring and reporting of, the discharges to minimize the adverse water quality impacts of the discharges. These injuries are fairly traceable to the violations and redressable by the Court.



15. For example, one member of ONDA has hiked, long-distance backpacked, and packrafted at many locations in the Paradise North Military Operations Area. This member enjoys hiking without trails, and regularly uses cross-country travel to explore and access places to recreate, including crisscrossing through essentially all of the Paradise North Area. This member regularly drinks out of water sources when using the remote Paradise North Area, including the Owyhee River and West Little Owyhee River. This member has walked large portions of the Oregon Desert Trail through the Paradise North Area. In 2016, this member enjoyed a hiking and packrafting trip through large portions of the West Little Owyhee River and mainstem Owyhee River in the Paradise North Area. They started the trip hiking near the headwaters of the West Little Owyhee, hiked along the West Little Owyhee for several miles, hiked inland for many miles, and then hiked and packrafted roughly twenty miles of the West Little Owyhee to the confluence of the West Little Owyhee and mainstem Owyhee. That same year, this member paddled from the confluence of the West Little Owyhee and mainstem Owyhee to the Owyhee Dam at Lake Owyhee State Park. A substantial portion of that paddling trip was outside the Paradise North Area and downstream of nearly all of the Air Force's discharges in the Paradise North Area. On these trips, the member enjoyed interacting with many species that depend on waterbodies throughout the Paradise North Area, including big horned sheep, freshwater mussels, pronghorn, coyote, and deer. The member has plans to return to the West Little Owyhee River next year for hiking and to the Owyhee River next year for a rafting and paddling trip. This member is aware of the Air Force's illegal discharges in the Paradise North Area and the connectivity and distances between many of the smaller tributaries and the main waterbodies in the Paradise North area. The member is concerned about the Air Force illegally polluting the water sources they use and drink from on their trips, and about the impacts



these chemicals have on the aquatic species that make up the environment in the Paradise North Area that this person enjoys, adversely impacting their use and enjoyment of the West Little Owyhee and the mainstem Owyhee.

16. And another member of ONDA is a rafting guide on the Owyhee River and regularly backpacks, boats, fishes, hikes, swims, rockhounds, sightsees, takes photos, star gazes, camps, views wildlife, and bird watches in the Paradise North Area. This member spends two months or more each year rafting the Owyhee River in good water years, and spends many more days and weeks out on the Owyhee River recreating in the Paradise North Area and outside of the Paradise North Area downstream of nearly all waterbodies in the Paradise North Area. This member has seen and heard the Air Force's flight operations, and they have been startled in the past by the Air Force's flight operations at low levels in the Owyhee Canyon. This member is concerned about the deposition of chaff and flare and related materials into an otherwise pristine environment, and the impacts of metals on the sensitive fish, wildlife, and plant species found in the Paradise North Military Operations Area. These concerns adversely impact their use and enjoyment of the Owyhee River.

17. To provide another example, one member of ONDA has utilized many waterbodies throughout the Paradise North Area. This member travels to the Paradise North Area at least annually to camp, hike, and explore. Sometimes these trips include locating and documenting cultural artifacts, fishing, swimming, and monitoring and documenting sensitive and rare plants. In June 2024, this member camped in the Three Forks area, crossing the Middle Fork Owyhee River and camping at the confluence of the North Fork Owyhee River and mainstem Owyhee River. They waded into the confluence and fished, catching and releasing redband trout and bass. In 2023, this member camped at Anderson Crossing on the West Little

Owyhee Rive and drove from there to the rim of the mainstem Owyhee, stopping and exploring along the way. During that trip, they waded and swam in the West Little Owyhee River downstream of a beaver dam, documented cultural artifacts, and monitored and documented sensitive and rare plants. Also on that trip, they drove to the headwaters of Tent Creek and observed some sage grouse. They have explored many other waterbodies in the Owyhee region, such as springs and closed water basins, like Horse Hill Reservoir, where they discovered living organisms like Dry Lake Fairy Shrimp. They have also ventured into the head of Massey Canyon, within which lies Jeff Reservoir, a habitat that supports fish populations. Over the past few years, as part of their trips to the West Little Owyhee River area, they have explored Jack Creek and Field Creek, documenting artifact sites at or near the creeks, and have driven parallel to and taken photographs of Pole Creek. In 2023, this member enjoyed a rafting trip on the mainstem Owyhee River, entering around Rome, Oregon, passing by Crooked Creek, and exited roughly 45 miles downstream, around the Birch Creek Historic Ranch. This trip was downstream of nearly all waterbodies in the Paradise North Area. In 2022, this member camped around Rattlesnake Creek in the Paradise North Area, hiking along the creek, and they enjoyed observing the headwaters of Little Rattlesnake Creek. This member has long been aware of and concerned by the Air Force's operations in the Paradise North Area and neighboring military operations areas. They have observed the Air Force's testing flights in Oregon. This member is aware of the geography throughout the Paradise North Area and the larger Owyhee ecosystem. They are concerned about the long-term impacts of chaff and flares on the waterbodies throughout the Paradise North Area and downstream of the area, which adversely impacts their use and enjoyment of those waterbodies.

18. To provide another example, another member of ONDA has used many waterbodies throughout the Paradise North Area, regularly making trips to the area. They enjoy hiking, camping, floating, and photography and videography on these trips. In June 2024, this member floated on the mainstem Owyhee River for 77 miles, entering at Garat Crossing in Idaho, past the West Little Owyhee River, and then existing at Three Forks, enjoying views of the Middle Fork and North Fork Owyhee Rivers. They have enjoyed a lot of Owyhee River trips over the years, frequently starting in Idaho or Nevada and ending around Three Forks. Approximately ten to twelve years ago, this member hiked along the West Little Owyhee, around its confluence with Toppin Creek; they camped at the rim and hiked down into the canyon, and they enjoyed observing bird life and the geology of the canyon. They frequently hike and camp in and around Antelope Creek/Big Antelope Creek, and Twin Springs Gorge (a tributary to Big Antelope Creek) with their last trip in June 2023 and their next trip in September 2024; they particularly enjoy hiking in the deep gorge section of Big Antelope Creek, which runs from its confluence with the mainstem of the Owyhee and then up Big Antelope Creek approximately ten miles. On their recent 2024 float trip, they stopped at the confluence of Big Antelope Creek with the mainstem Owyhee, and hiked upstream a mile, spotting redband trout in some of the deeper pools of the creek and observing a beaver. On their river trips, they frequently search for and draw from fresh-water springs, and if a spring is not available, they filter water from side canyon streams. This member is aware of the Air Force's military training flights in the Paradise North Area, and is concerned about the impacts of chaff and flare discharges on waterbodies in and downstream of this area.

19. To provide a final example, another member of ONDA travels to the Owyhee area, including the Paradise North Area, annually or every other year to enjoy the Owyhee

environment, and they will continue to do so. Approximately ten years ago, they backpacked along Antelope Creek/Big Antelope Creek. They hiked into the canyon, camped along the rim, and swam in the creek. On this trip, they relied on Big Antelope Creek as their water source. They last explored the West Little Owyhee River approximately eight years ago on a five-day camping trip. On this trip, they camped around Anderson Crossing and the rim of Toppin Creek, hiked and photographed the area, hiked around Toppin Creek and Toppin Canyon. They also crossed over to the rim of the main Owyhee River and camped. On this trip, they observed Pronghorn, rattlesnakes, and other critters, and they filtered their water from the West Little Owyhee and mainstem Owyhee Rivers. Approximately five or six years ago, they enjoyed a camping trip in the Three Forks area (in the Paradise North Area) and downstream of that area in the Chalk Basin outside the Paradise North Area and downstream of nearly all the Air Force's discharges. This member is aware of the Air Force's training operations in the area, including the discharge of chaff and flares, and they are concerned about pollution from those operations on the waterbodies in the area.

20. ONDA has organizational standing to bring this action. ONDA has been actively engaged in a variety of educational and advocacy efforts to improve water quality to address sources of water quality degradation in the waters of the Owyhee River and its many tributaries throughout the Paradise North Area. The Air Force's failure to obtain an NPDES permit(s) for its discharges has deprived ONDA of information that would be required by the monitoring and reporting conditions of the permit(s), which information would be available to ONDA. This information could assist ONDA in its efforts to educate and advocate for greater environmental protection. Thus, ONDA's organizational interests have been adversely affected by the Air

Force's violations. These injuries are fairly traceable to the violations and redressable by the Court.

21. Defendant UNITED STATES AIR FORCE is a federal agency within the United States Department of Defense. The United States Air Force owns and operates the aircraft and conducts the training exercises that cause the discharges of pollutants subject to this complaint.

22. Defendant FRANK KENDALL III is sued solely in his official capacity as the Secretary of the United States Department of the Air Force. As the Secretary of the United States Department of the Air Force, Secretary Kendall is responsible for ensuring that the United States Air Force complies with applicable laws.

### **LEGAL FRAMEWORK**

23. The CWA is designed to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251. The Act attempts to achieve these goals through a regulatory scheme using permits, technology controls, and water quality-based pollution controls.

24. The Act prohibits “the discharge of any pollutant by any person” from a point source into navigable waters unless allowed by an NPDES. *Id.* § 1311(a); *see Ecological Rights Found. v. Pac. Lumber Co.*, 230 F.3d 1141, 1145 (9th Cir. 2000) (discharge of pollutants without permit, or in violation of permit, is illegal).

25. NPDES permits are issued by the EPA or by a state agency authorized by EPA to administer the NPDES program. *See* 33 U.S.C. § 1342(a)–(b); *Ass’n to Protect Hammersley, Eld, and Totten Inlets v. Taylor Res., Inc.*, 299 F.3d 1007, 1009 (9th Cir. 2002). The Oregon DEQ is authorized to issue NPDES permits for discharges to waters in the state of Oregon.

26. The Act defines the term “discharge of any pollutant” as “any addition of any *pollutant* to the waters of the [United States] from any *point source* other than a vessel or other floating craft.” 33 U.S.C. § 1362(12) (emphases added).

27. Pollutant, in turn, means “dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, *munitions*, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.” *Id.* § 1362(6) (emphasis added).

28. And a “point source” is “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharged . . . .” *Id.* § 1362(14).

29. CWA jurisdiction extends to “navigable waters,” a phrase defined as “the waters of the United States.” *Id.* § 1362(7). This includes tributaries to navigable waters. 40 C.F.R. § 120.2(1)(ii).

30. Ongoing violations of the CWA and NPDES permits are enforceable through the Act’s citizen suit provision. 33 U.S.C. § 1365(a), (f). This provision requires citizens to send a notice letter to the EPA, the state in which the alleged violation occurs, and to the alleged violator, before bringing suit. *Id.* § 1365(b).

## **STATEMENT OF FACTS**

### **I. Environment and Waterbodies in the Paradise North Area.**

31. The vast landscape known as “the Owyhee” stretches from the remote Sheepshead and Trout Creek Mountains of the northern Great Basin, to the broad expanses of sagebrush dissected by the Owyhee River canyonlands, to the southeastern front of the Blue

Mountains, where the Malheur River emerges to join the Snake River. These are some of the most remote and wild landscapes in the lower 48 states. In fact, more than half of this remarkable region has been recognized by the U.S. Bureau of Land Management and the public as having irreplaceable wilderness values.

32. This expanse of sagebrush steppe is a vitally important part of our national heritage. It is home to more than 350 species of fish and wildlife. This includes threatened, endangered, and sensitive species such as the greater sage-grouse, pygmy rabbit, bighorn sheep, pronghorn antelope, Columbia spotted frog, tiger salamander, Malheur springsnail, and native trout including redband, bull, and Lahontan cutthroat. These species depend both on sweeping native sage-steppe uplands and vital perennial and intermittent streams, springs, wet meadows and riparian areas that breathe life into this arid, high desert landscape and feed into hidden canyons of the Owyhee Rivers.

33. In 1984, Congress designated 120 miles of the Main Owyhee River as a federal wild and scenic river pursuant to the National Wild and Scenic Rivers Act. In the Oregon Omnibus Wild and Scenic Rivers Act of 1988, Pub. L. 100-557, *codified at* 16 U.S.C. § 1274(a)(91), Congress added 57 miles of the West Little Owyhee and 10 miles of the North Fork Owyhee to the national wild and scenic rivers system. About 110 miles of these wild and scenic rivers are located within the Paradise North operations area.

34. Much of the Owyhee Wild and Scenic Rivers system and its tributary streams occur within steep, rocky canyons. The Owyhee canyonlands provide habitat for over 200 species of wildlife. Several plant species within the canyonlands are classified as federal or state sensitive species or are on “watch lists.” Redband trout, which have been petitioned for listing under the Endangered Species Act, inhabit the West Little Owyhee River segment of the system.



35. The Owyhee River flows from the east portion of the Paradise North Area to the northwest portion of the Paradise North Area. This river is 280 miles long, approximately 35–40 miles of which are in the Paradise North Area, and ultimately flows to the Snake River and then the Columbia River.

36. The West Little Owyhee River flows from the southwest portion of the Paradise North Area to the northeast, where it flows into the Owyhee River. This river is approximately 60–65 miles long, all of which is in the Paradise North Area. Some of the named tributaries to the West Little Owyhee River include Jack Creek, of which approximately 10–15 miles are in the Paradise North Area, and Toppin Creek, of which approximately 35–40 miles are in the Paradise North Area.

37. The North Fork Owyhee River is a tributary to the Owyhee River and flows southwest near the northern portion of the Paradise North Area until meets the mainstem of the Owyhee River near the Three Forks Recreation Site in the Paradise North Area. This river is approximately 30–35 miles long, approximately 9–11 miles of which are in the Paradise North Area.

38. The Middle Fork Owyhee River is a tributary of the North Fork Owyhee River that is located in Idaho and Oregon. In Oregon, this river generally winds northwest in the Paradise North Area until it meets the North Fork Owyhee River, less than a mile upstream from the confluence of the North Fork Owyhee River and the Mainstem Owyhee River. There are approximately 10–15 miles of the Middle Fork Owyhee River in the Paradise North Area. Some of the named tributaries of the Middle Fork Owyhee River within the Paradise North Area include Field Creek and Pole Creek.

39. Crooked Creek and Antelope Creek are other tributaries to the Owyhee River. Crooked Creek is an approximately 50-to-60-mile tributary to the Owyhee River, entering the Owyhee River just downstream (or north) of Rome, Oregon, outside the Paradise North Area. Rattlesnake Creek and Dry Creek are tributaries to Crooked Creek, and portions of Rattlesnake Creek and Dry Creek, between approximately 10 and 25 miles for each waterbody, are in the Paradise North Area. Little Rattlesnake Creek is a tributary to Rattlesnake Creek, and is approximately 14 miles long and is located entirely in the Paradise North Area. Antelope Creek or Big Antelope Creek runs north to northeast for approximately 40–45 miles until it converges with the Owyhee River just downstream of the confluence of the West Little Owyhee River and Owyhee River. Pole Creek is a tributary to Big Antelope Creek that is approximately 25 miles long (this is a different Pole Creek from the one listed as a tributary to the Middle Fork Owyhee River), and Steer Canyon is a tributary to Pole Creek. Big Antelope Creek is entirely within the Paradise North Area.

40. Tent Creek is a short creek, just over 30 miles, that flows through the southwest corner of the Paradise North Area for approximately 22 miles. Tent Creek then enters Idaho and ultimately flows to the Little Owyhee River in Idaho, which flows to the South Fork Owyhee River in Idaho, which flows to the Owyhee River in Idaho before the Owyhee River enters Oregon in the Paradise North Area.

41. There are many other small streams and creeks, including many that are unnamed, throughout the Paradise North Area that ultimately, either directly or indirectly, flow to the Owyhee River. Indeed, as shown in the map above (paragraph 12) and in Exhibit 2, there are at least 600 waterbodies and at least 1,880 miles of waterbodies in the Paradise North Military Operations Area.

## **II. The Air Force's Use of Chaff and Flares in the Paradise North Area.**

42. The Air Force is in violation of the CWA because chaff, flares, and/or other similar pollutants discharged from aircraft during training missions are being discharged into waters of the United States in the Paradise North area which spans 968,783 acres of land in southeastern Oregon. In a 2023 Final Environmental Impact Statement (“FEIS”), prepared by the Air Force as part of its “Mountain Home AFB Optimization” proposal to expand and intensify its military overflight training operations in the Owyhee region, the Air Force states that the department uses chaff and flares during training exercises to interfere with Air Traffic Control and “enemy” RADAR. Chaff consists of reflective, aluminum-coated glass fibers and other materials and is stored in canisters that contain millions of fibers and/or materials that are dispensed from aircraft when a missile attack is imminent. The fibers create a “RADAR cloud” and then drop to the ground. Flares are pyrotechnic devices that consist of highly flammable materials, plastic end caps, and/or other materials.

43. The Air Force has acknowledged that chaff fibers or residual matter from chaff and flares “could collect on water surfaces.” The Air Force claims in its 2023 FEIS that chaff and flares “are not considered toxic” and “would not affect ground or water quality.” The department asserts that the “probability of a substantial amount” of material being deposited “would be minuscule”—although the amount of chaff and flares permitted under the approved action “would potentially increase over baseline amounts.”

44. The Air Force states in the 2023 FEIS that the use of chaff is “covered” annually by a “Chaff Clearance Letter” that provides guidance from the Air Force and the Federal Aviation Administration. Nowhere in the FEIS does the Air Force indicate that it has ever sought or secured a CWA permit from the EPA or Oregon DEQ. The annual “Chaff Clearance Letter” is

not, and cannot serve as, an NPDES permit. ONDA has reviewed the most recent such letter provided to it, dated January 6, 2022, and it contains no indication of or reference to a CWA permit.

45. Through public comments dated November 22, 2019, October 22, 2021, and April 3, 2023, as part of the public process for the Mountain Home AFB Optimization proposal, ONDA raised this concern. ONDA informed the Air Force, through those comment letters, that the agency's ongoing and proposed Mountain Home AFB training activities were damaging fish and wildlife habitat and water resources and were in violation of the CWA. Among other concerns, ONDA pointed out that the Air Force itself has identified both aluminum and copper as elements within chaff that could cause detrimental effects to aquatic species, humans, and other wildlife. ONDA asked the Air Force to quantify the amount of copper that aquatic species and their habitats might be exposed to and resulting concentrations that could be expected in the affected water bodies under ongoing and proposed training exercises. The Air Force has not done so.

46. Copper, aluminum, and other metals can be toxic to bull trout, Lahontan cutthroat trout, redband and other native trout at very low levels. ONDA cited numerous peer-reviewed, published studies illustrating this, in its Notice Letters.

47. The Air Force also has observed that “[u]se of chaff over or immediately adjacent to highly sensitive areas such as Wilderness Areas, Wild and Scenic Rivers, National Parks and Monuments, and other pristine natural areas may be incompatible with the land use management objectives for those areas.” Yet, the Air Force has never adequately analyzed the known and potential effects of chaff and flares on sensitive aquatic species and highly sensitive areas that occur in and around the Owyhee Canyonlands—an area that encompasses hundreds of thousands

of acres of wilderness lands and almost 200 miles of protected rivers as part of the Owyhee Wild and Scenic Rivers system.

48. Several sensitive fish species are found within this landscape, including Interior redband trout (*Oncorhynchus mykiss spp*), Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*), and bull trout (*Salvelinus confluentus*). Bull trout and Lahontan cutthroat trout are listed as threatened species under the Endangered Species Act, and redband trout are designated as a species of concern by the U.S. Department of the Interior and the state of Oregon. According to the Bureau of Land Management, there are at least 15 native fish species that occur in this area (not to mention amphibians and aquatic invertebrates, many of which also have various state and federal special status designations).

49. If chaff or flares are released over the Owyhee or its tributaries and other waters within the Oregon portion of the training operations area, there is a high likelihood that concerning levels of pollutants will enter the waterways that support these sensitive fish and other species. The steep, narrow canyons that many of these streams flow through will likely act as a funnel for clouds of chaff and flares, magnifying the concentration of pollutants that will enter the water.

50. On October 4, 2022, ONDA asked the Air Force, pursuant to the Freedom of Information Act, 5 U.S.C. § 552, *as amended*, to provide copies “of any NPDES or related permit(s) authorizing any discharge of pollutants associated with military aircraft training activities by the Mountain Home Air Force Base.” In response, the agency produced five documents, all of which were associated with on-base waste and storm water treatment activities. ONDA also checked with the state of Oregon (DEQ), who indicated that they have no record of any NPDES permit for Mountain Home AFB activities occurring in Oregon.

51. On October 19, 2023, ONDA sent another FOIA request to the Air Force, asking again for any NPDES or related permits authorizing any discharge of pollutants associated with aircraft training activities, as well as any other records related to NPDES permitting and any public comments and other correspondence, including from the Federal Aviation Administration, received between the time the Air Force issued the 2023 FEIS, in March, and the time it issued its Record of Decision approving the expanded training operations plan, in July 2023. To date, the Air Force has not released any records to ONDA.

52. To ONDA's knowledge, the Mountain Home AFB does not have, and has never had, a required permit for discharge of pollutants into navigable waters in Oregon. In fact, the Air Force does not have, and has never had, a required CWA permit for discharge of pollutants into navigable waters in Idaho or in Nevada, either. (The Mountain Home Range Complex Airspace consists of six Military Operations Areas: the Paradise North Area in southeastern Oregon, plus the Owyhee North and Jarbridge North areas in Idaho and the Paradise South, Owyhee South, and Jarbridge South areas in Nevada.)

53. In response to ONDA's assertion, during the Mountain Home AFB Optimization planning process, that a permit was required for discharges of chaff and flares during training exercises, the Air Force in the 2023 FEIS stated that "military aircraft are not point sources under the CWA and the National Pollutant Discharge Elimination System does not apply. There are currently no requirements under the CWA that apply to military aircraft operations." FEIS at B-188 (also selectively quoting the definition of a point source as "pipes or man-made ditches"). To date, the Air Force has not responded at all to ONDA's reiteration of this assertion in the Notice Letters.

54. The Air Force does not have, and has not had during the prior six years, an NPDES permit authorizing discharges of pollutants to waters of the United States within Oregon associated with the Mountain Home AFB aircraft training exercises.

55. Aircraft are point sources.

56. Chaff is a pollutant. Flares are a pollutant. The chemicals and/or materials that remain after flares burn are pollutants. Aluminum is a pollutant. Glass is a pollutant. Copper is a pollutant. Plastic is a pollutant.

**CAUSE OF ACTION**  
**VIOLATION OF THE CLEAN WATER ACT**

57. Plaintiff realleges and incorporates by reference all preceding paragraphs.

58. The Air Force is in violation of section 301(a) of the CWA, 33 U.S.C. § 1311(a), by discharging pollutants to waters of the United States from military aircraft as described herein without NPDES permits. These violations are violations of an “effluent standard or limitation” as defined by section 505(f) of the CWA, *id.* § 1365(f). These violations occur each and every day that the Air Force releases flares, chaff or similar materials from aircraft while flying over the Owyhee River and other waters of the United States in the Mountain Home Air Force Base’s Paradise North Military Operations Area in southeastern Oregon.

59. On information and belief, these violations committed by the Air Force are continuing or are reasonably likely to reoccur. Any and all additional violations of the CWA which occur after those described in the Notice Letters but before a final decision in this action should be considered continuing violations subject to this complaint.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff respectfully requests that the Court grant the following relief:

A. Issue a declaratory judgment that the Air Force has violated and continues to be in



violation of section 301(a) of the CWA, 33 U.S.C. § 1311(a), by discharging pollutants from military aircraft to waters of the United States without the authorization of NPDES permits as described herein;

B. Issue an order enjoining the Air Force from discharging pollutants from military aircraft to waters of the United States, including the Owyhee Wild and Scenic Rivers and their tributaries, as described herein until such discharges are authorized by NPDES permits;

C. Issue an injunction requiring the Air Force to take specific actions to evaluate and remediate the environmental harm caused by its violations;

D. Issue declaratory and/or injunctive relief warranted to insure that, if the Air Force secures NPDES permits for discharges from military aircraft, the Air Force's CWA violations at the Owyhee Wild and Scenic Rivers and their tributaries will not recur;

E. Grant such other preliminary and/or permanent injunctive relief as Plaintiff may request during the pendency of this case;

F. Award Plaintiff its litigation expenses, including reasonable attorneys' and expert witness fees, as authorized by section 505(d) of the CWA, 33 U.S.C. § 1365(d), and any other applicable authorizations; and

G. Grant such other further relief as Plaintiff may request or the Court deems just and proper.

DATED this 19th day of August 2024.

KAMPMEIER & KNUTSEN, PLLC

By: s/ Emma Bruden  
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Oregon Natural Desert Association

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[lacy@onda.org](mailto:lacy@onda.org)

*Attorneys for Plaintiff*

# EXHIBIT 1



August 16, 2023

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Secretary Lloyd J. Austin III  
U.S. Department of Defense  
1400 Defense Pentagon  
Washington, D.C. 20301-1400

Secretary Frank Kendall  
U.S. Department of the Air Force  
1690 Air Force Pentagon  
Washington, D.C. 20330-1670

Colonel Ernesto M. DiVittorio  
Wing Commander, 366th Fighter Wing  
Mountain Home Air Force Base  
1740 East Fairview Ave, PMB 20  
Meridian, Idaho 83642

Re: Notice of Violations and Intent to Sue under Clean Water Act,  
33 U.S.C. § 1251 *et seq.*

Dear Secretary Austin, Secretary Kendall, and Colonel DiVittorio:

Through counsel, the Oregon Natural Desert Association (“ONDA”) hereby notifies you of its intent to file suit against the U.S. Department of the Air Force and Secretary Frank Kendall in his official capacity as the Secretary of the U.S. Department of the Air Force (collectively, the “Air Force”), over the Mountain Home Air Force Base’s (“AFB”) ongoing violations of the Clean Water Act (“CWA” or “the Act”), 33 U.S.C. §§ 1251–1387. Through its ongoing military training exercises conducted from the Mountain Home AFB, the Air Force is violating section 301(a) of the CWA, 33 U.S.C. § 1311(a), by discharging pollutants into the waters of the United States without a permit. At the expiration of 60 days from the date of this letter, ONDA intends to file suit under the CWA’s citizen suit provision, 33 U.S.C. § 1365, and will seek declaratory and injunctive relief and all other relief authorized by law for these violations.

#### **LEGAL BACKGROUND**

The CWA is designed to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251. The Act prohibits “the discharge of any pollutant by any person” from a point source into navigable waters unless allowed by a National

Pollutant Discharge Elimination System (“NPDES”) permit. *Id.* § 1311(a). See *Ecological Rights Found. v. Pac. Lumber Co.*, 230 F.3d 1141, 1145 (9th Cir. 2000) (discharge of pollutants without permit, or in violation of permit, is illegal). NPDES permits are issued by the U.S. Environmental Protection Agency (“EPA”) or by a state agency authorized by EPA to administer the NPDES program. See 33 U.S.C. § 1342(a)–(b); *Ass’n to Protect Hammersley, Eld, and Totten Inlets v. Taylor Res., Inc.*, 299 F.3d 1007, 1009 (9th Cir. 2002). The Oregon Department of Environmental Quality (“DEQ”) is authorized to issue NPDES permits for discharges to waters in the state of Oregon.

The Act defines the term “discharge of any pollutant” as “any addition of any *pollutant* to the waters of the [United States] from any *point source* other than a vessel or other floating craft.” 33 U.S.C. § 1362(12) (emphases added). Pollutant, in turn, means “dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, *munitions*, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.” *Id.* § 1362(6) (emphasis added). And a “point source” is “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharged . . . .” *Id.* § 1362(14). CWA jurisdiction extends to “navigable waters,” a phrase defined as “the waters of the United States.” *Id.* § 1362(7). This includes tributaries to navigable waters. 40 C.F.R. § 120.2(1)(ii).

Ongoing violations of the CWA and NPDES permits are enforceable through the Act’s citizen suit provision. 33 U.S.C. § 1365(a), (f). This provision requires citizens to send a notice letter to the EPA, the state in which the alleged violation occurs, and to the alleged violator, before bringing suit. *Id.* § 1365(b). As required by the CWA, this letter provides notice of the violations that have occurred and continue to occur as a result of the Mountain Home AFB’s training exercises in southeastern Oregon. See 40 C.F.R. § 135.3(a).

### **VIOLATIONS OF THE CLEAN WATER ACT**

The Air Force is in violation of section 301(a) of the Clean Water Act, 33 U.S.C. § 1311(a), because chaff and flares discharged from aircraft during training missions are being discharged into waters of the United States in the Mountain Home AFB’s six Military Operations Areas, including the Paradise North area which covers almost one million acres of land in southeastern Oregon. The Air Force states in its 2023 Final Environmental Impact Statement (“FEIS”) for the Mountain Home AFB Optimization proposal that the department uses chaff and flares to interfere with Air Traffic Control and “enemy” RADAR. FEIS at 3-161 to -162.<sup>1</sup> “Chaff consists of reflective, aluminum-coated glass fibers” and is “stored in canisters that contain millions of fibers [that are] dispensed from aircraft when a missile attack is imminent.” *Id.* at 3-161. The fibers create a “RADAR cloud” and then drop to the ground. *Id.*

<sup>1</sup> U.S. Dep’t of the Air Force, *Final Environmental Impact Statement for Airspace Optimization for Readiness at Mountain Home Air Force Base, Idaho* (March 2023), <https://www.mountainhomeafbairspaceeis.com/index.aspx>.

The Air Force has acknowledged that “[c]haff fibers or residual matter from chaff and flares could collect on water surfaces.” Draft EIS at 2-40.<sup>2</sup> The FEIS claims that chaff and flares “are not considered toxic” and “would not affect ground or water quality.” FEIS at 2-39. The department asserts that the “probability of a substantial amount” of material being deposited “would be minuscule”—although the amount of chaff and flares permitted under the proposed action “would potentially increase over baseline amounts.” *Id.* at 2-40.

The Air Force indicates that the use of chaff is “covered” annually by a “Chaff Clearance Letter” that provides guidance from the Air Force and the Federal Aviation Administration. FEIS at 3-161. Nowhere in the FEIS does the Air Force indicate that it has ever sought or secured a CWA permit from the EPA or DEQ; the annual “Chaff Clearance Letter” cannot serve as an NPDES permit. ONDA has reviewed the most recent such letter provided to us, dated January 6, 2022, and it contains no indication of or reference to a CWA permit.

The Supreme Court has confirmed that the U.S. Navy’s “release of ordnance from aircraft or from ships into navigable waters is a discharge of pollutants” under the Act. *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 309 (1982). Since that time, other courts have held that coal and coal dust blown off the top of moving rail cars and into navigable waters amounted to a point source discharge, *Sierra Club v. BNSF Ry. Co.*, No. 2:13-cv-00967-JCC, ECF 337 (W.D. Wash. Oct. 25, 2016), spraying of pesticides from aircraft is a discharge from a point source, *Peconic Baykeeper, Inc. v. Suffolk Cnty.*, 600 F.3d 180, 188–89 (2d Cir. 2010), spraying of pollutants from helicopters into the air, which eventually landed on navigable waters, was a discharge from a point source, *No Spray Coal., Inc. v. City of New York*, No. 00 Civ. 5395(GBD), 2005 WL 1354041, \*5 (S.D.N.Y. June 8, 2005), and “aerial spraying of pesticide conducted by the Forest Service is point source pollution” and requires an NPDES permit. *League of Wilderness Defs./Blue Mtns. Biodiversity Proj. v. Forsgren*, 309 F.3d 1181, 1192–93 (9th Cir. 2002). The Air Force’s release of chaff and flares into navigable waters throughout the Owyhee region fits easily into the courts’ understanding of what constitutes a prohibited discharge of pollutants from a point source under the CWA.

Through public comments dated November 22, 2019, October 22, 2021, and April 3, 2023, ONDA raised this concern and informed the Air Force that the agency’s ongoing and proposed Mountain Home AFB training activities were damaging fish and wildlife habitat and water resources and were in violation of the CWA. Among other concerns, ONDA pointed out that the Air Force itself has identified both aluminum and copper as elements within chaff that could cause detrimental effects to aquatic species—not to mention potential impacts to humans and other wildlife—stating that:

sensitive aquatic species could be adversely affected by repeated, concentrated exposure to chaff deposition. If such an environment exists in an area proposed

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<sup>2</sup> U.S. Dep’t of the Air Force, *Draft Environmental Impact Statement for Airspace Optimization for Readiness at Mountain Home Air Force Base, Idaho* (July 2021), <https://www.mountainhomeafbairspaceeis.com/index.aspx>.

for chaff use, the presence of threatened or endangered aquatic species should be identified through consultation with the local office of the U.S. Fish and Wildlife Service and the state fish and game or fish and wildlife department. If protected aquatic species or their habitats are known to occur or could be in the area, the environmental assessment should include a quantification of the amount of copper that they might be exposed to and resulting concentrations that could be expected in the affected water bodies under the proposed action.

USAF (1997) at 163.<sup>3</sup> It is well established that copper, aluminum, and other metals can be toxic to bull trout, Lahontan cutthroat trout, redband and other native trout at very low levels. *See, e.g.,* Kiser *et al.* (2010) (bull trout and copper),<sup>4</sup> Bopp *et al.* (2008) (redband trout and copper),<sup>5</sup> Farag *et al.* (2011) (cutthroat trout and copper),<sup>6</sup> Woodward *et al.* (2011) (cutthroat trout and aluminum),<sup>7</sup> Book *et al.* (2019) (rainbow trout and silica).<sup>8</sup>

The Air Force also has observed that “[u]se of chaff over or immediately adjacent to highly sensitive areas such as Wilderness Areas, Wild and Scenic Rivers, National Parks and Monuments, and other pristine natural areas may be incompatible with the land use management objectives for those areas.” USAF (1997) at 3. Yet, the Air Force failed in both its 2021 DEIS and 2023 FEIS for Mountain Home AFB to adequately analyze the known and potential effects of chaff and flares on sensitive aquatic species and highly sensitive areas that occur in and around the Owyhee Canyonlands—an area that encompasses hundreds of thousands of acres of wilderness lands and almost 200 miles of protected rivers as part of the Owyhee Wild and Scenic

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<sup>3</sup> U.S. Air Force. 1997. Environmental Effects of Self-Protection Chaff and Flares. Headquarters Air Combat Command Langley Air Force Base, Virginia. *Available at* <https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB98110620.xhtml>.

<sup>4</sup> Kiser, T. *et al.* 2010. Impacts and Pathways of Mine Contaminants to Bull Trout (*Salvelinus confluentus*) in an Idaho Watershed. *Environmental Contamination and Toxicology* 59(2):301-11.

<sup>5</sup> Bopp, S.K. *et al.* 2008. Copper-induced oxidative stress in rainbow trout gill cells. *Aquatic Toxicology* 86(2): 197-204. <https://doi.org/10.1016/j.aquatox.2007.10.014>.

<sup>6</sup> Farag, A.M. 2011. Dietary Effects of Metals-Contaminated Invertebrates from the Coeur d'Alene River, Idaho, on Cutthroat Trout. *Transactions of the American Fisheries Society* 128(4): 578-592. [https://doi.org/10.1577/1548-8659\(1999\)128<0578:DEOMCI>2.0.CO;2](https://doi.org/10.1577/1548-8659(1999)128<0578:DEOMCI>2.0.CO;2).

<sup>7</sup> Woodward, D.F. *et al.* 2011. Sensitivity of Endemic Snake River Cutthroat Trout to Acidity and Elevated Aluminum. *Transactions of the American Fisheries Society* 118(6): 630-643. [https://doi.org/10.1577/1548-8659\(1989\)118<0630:SOESRC>2.3.CO;2](https://doi.org/10.1577/1548-8659(1989)118<0630:SOESRC>2.3.CO;2).

<sup>8</sup> Book, F. *et al.* 2019. Ecotoxicity screening of seven different types of commercial silica nanoparticles using cellular and organismic assays: Importance of surface and size. *NanoImpact* 13: 100-111. <https://doi.org/10.1016/j.impact.2019.01.001>.



Rivers system. All told, there are 438 miles of streams and about 4,500 surface acres of flatwater fisheries habitat in the Bureau of Land Management's 4.6 million-acre Southeastern Oregon Resource Management Plan area (which covers Mountain Home AFB's Paradise North training area) alone.

Several sensitive fish species are found within this remarkable landscape, including Interior redband trout (*Oncorhynchus mykiss spp*), Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*), and bull trout (*Salvelinus confluentus*). Bull trout and Lahontan cutthroat trout are listed as threatened species under the Endangered Species Act, and redband trout are designated as a species of concern by the U.S. Department of the Interior and the state of Oregon. According to the Bureau of Land Management, there are at least 15 native fish species that occur in this area (not to mention amphibians and aquatic invertebrates, many of which also have various state and federal special status designations). If chaff or flares are released over the Owyhee or its tributaries and other waters within the Oregon portion of the training project area, there is a high likelihood that concerning levels of pollutants will enter the waterways that support these sensitive fish and other species. The steep, narrow canyons that many of these streams flow through will likely act as a funnel for clouds of chaff and flares, magnifying the concentration of pollutants that will enter the water.

In 2022, ONDA asked the Air Force, pursuant to the Freedom of Information Act, 5 U.S.C. § 552, *as amended*, to provide copies "of any NPDES or related permit(s) authorizing any discharge of pollutants associated with military aircraft training activities by the Mountain Home Air Force Base." In response, the agency produced five documents, all of which were associated with on-base waste and storm water treatment activities. We also checked with DEQ, who indicated that they have no record of any NPDES permit for Mountain Home AFB activities occurring in Oregon. To our knowledge, the Mountain Home AFB does not have, and has never had, a required permit for discharge of pollutants into navigable waters in Oregon.

The Air Force confirmed as much when, in response to this public concern, the agency claimed (incorrectly) in the 2023 FEIS that "military aircraft are not point sources under the CWA and the National Pollutant Discharge Elimination System does not apply. There are currently no requirements under the CWA that apply to military aircraft operations." FEIS at B-188 (also selectively quoting the definition of a point source as "pipes or man-made ditches"). This is incorrect as a matter of law.

In sum, the Air Force is violating section 301(a) of the CWA, 33 U.S.C. § 1311(a), by discharging chaff and similar materials to surface waters while conducting military training exercises from the Mountain Home AFB without an NPDES permit. These violations occur each and every day the Air Force releases chaff or similar materials during these military training exercises. ONDA provides notice that it intends to sue for such unlawful discharges in Oregon associated with training missions in or involving the Paradise North area. This area includes, among others, hundreds of miles in the Owyhee Wild and Scenic Rivers system and its tributary streams.

**PERSONS GIVING NOTICE**

The name, address, and phone number of the person giving notice of intent to sue is:

Oregon Natural Desert Association  
50 SW Bond St., Ste. 4  
Bend, OR 97702  
541-330-2638

Counsel for the party(ies) giving notice is:

Peter M. Lacy  
Oregon Natural Desert Association  
2009 NE Alberta Street, Suite 207  
Portland, OR 97211  
503-525-0193 | [lacy@onda.org](mailto:lacy@onda.org)

**CONCLUSION**

It is ONDA's hope that this notice will make it unnecessary to pursue litigation concerning this issue. ONDA is prepared, however, to seek judicial intervention to address the department's failure to properly carry out its mandatory duties under the CWA. ONDA has a policy of pursuing negotiations whenever possible. This policy applies to all types of environmental disputes, including enforcement of the CWA. In keeping with this policy, we invite you to discuss with us your compliance with the CWA. Please direct any questions concerning this notice to Peter M. Lacy, lead counsel for the above party. We look forward to your response.

Sincerely,

s/ Peter M. Lacy

Peter M. ("Mac") Lacy, Senior Attorney  
Oregon Natural Desert Association

2009 NE Alberta St., Ste. 207  
Portland, OR 07211  
[lacy@onda.org](mailto:lacy@onda.org)

Cc: Ryan Houston, Executive Director  
Oregon Natural Desert Association  
[rhouston@onda.org](mailto:rhouston@onda.org)

Mark Salvo, Program Director  
Oregon Natural Desert Association  
[msalvo@onda.org](mailto:msalvo@onda.org)

**CERTIFICATE OF SERVICE**

I, Peter M. Lacy, declare under penalty of perjury of the laws of the United States that I am counsel for Oregon Natural Desert Association and that on August 16, 2023, I caused copies of the foregoing Notice of Violations and Intent to Sue Under the Clean Water Act to be served on the following by depositing them with the United States Postal Service, certified mail, return receipt requested, postage prepaid:

Secretary Lloyd J. Austin III  
U.S. Department of Defense  
1400 Defense Pentagon  
Washington, D.C. 20301-1400

Secretary Frank Kendall  
U.S. Department of the Air Force  
1690 Air Force Pentagon  
Washington, D.C. 20330-1670

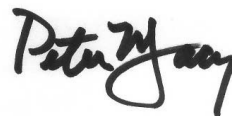
Colonel Ernesto M. DiVittorio  
Wing Commander, 366th Fighter Wing  
Mountain Home Air Force Base  
1740 East Fairview Ave, PMB 20  
Meridian, Idaho 83642

Attorney General Merrick B. Garland  
U.S. Department of Justice  
950 Pennsylvania Avenue, N.W.  
Washington, D.C. 20530-0001

Administrator Michael S. Regan  
U.S. Environmental Protection Agency  
William Jefferson Clinton Building  
1200 Pennsylvania Ave., N.W.  
(Mail Code 1101A)  
Washington, D.C. 20460

Regional Administrator Casey Sixkiller  
U.S. Env'tl. Protection Agency, Region 10  
1200 Sixth Avenue, Suite 155  
Seattle, WA 98101

Director Lea Feldon  
Oregon Department of Environmental Quality  
700 NE Multnomah Street, Suite 600  
Portland, OR 97232-4100



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April 10, 2023

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Secretary Lloyd J. Austin III  
U.S. Department of Defense  
1400 Defense Pentagon  
Washington, D.C. 20301-1400

Secretary Frank Kendall  
U.S. Department of the Air Force  
1690 Air Force Pentagon  
Washington, D.C. 20330-1670

Colonel Ernesto M. DiVittorio  
Wing Commander, 366th Fighter Wing  
Mountain Home Air Force Base  
1740 East Fairview Ave, PMB 20  
Meridian, Idaho 83642

Re: Notice of Violations and Intent to Sue under Clean Water Act,  
33 U.S.C. § 1251 *et seq.*

Dear Secretary Austin, Secretary Kendall, and Colonel DiVittorio:

Through counsel, the Oregon Natural Desert Association (“ONDA”) hereby notifies you of its intent to file suit against the U.S. Department of the Air Force and Secretary Frank Kendall in his official capacity as the Secretary of the U.S. Department of the Air Force (collectively, the “Air Force”), over the Mountain Home Air Force Base’s (“AFB”) ongoing violations of the Clean Water Act (“CWA” or “the Act”), 33 U.S.C. §§ 1251–1387. Through its ongoing military training exercises conducted from the Mountain Home AFB, the Air Force is violating section 301(a) of the CWA, 33 U.S.C. § 1311(a), by discharging pollutants into the waters of the United States without a permit. At the expiration of 60 days from the date of this letter, ONDA intends to file suit under the CWA’s citizen suit provision, 33 U.S.C. § 1365, and will seek declaratory and injunctive relief and all other relief authorized by law for these violations.

#### **LEGAL BACKGROUND**

The CWA is designed to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251. The Act prohibits “the discharge of any pollutant by any person” from a point source into navigable waters unless allowed by a National

Pollutant Discharge Elimination System (“NPDES”) permit. *Id.* § 1311(a). *See Ecological Rights Found. v. Pac. Lumber Co.*, 230 F.3d 1141, 1145 (9th Cir. 2000) (discharge of pollutants without permit, or in violation of permit, is illegal). NPDES permits are issued by the U.S. Environmental Protection Agency (“EPA”) or by a state agency authorized by EPA to administer the NPDES program. *See* 33 U.S.C. § 1342(a)–(b); *Ass’n to Protect Hammersley, Eld, and Totten Inlets v. Taylor Res., Inc.*, 299 F.3d 1007, 1009 (9th Cir. 2002). The Oregon Department of Environmental Quality (“DEQ”) is authorized to issue NPDES permits for discharges to waters in the state of Oregon.

The Act defines the term “discharge of any pollutant” as “any addition of any *pollutant* to the waters of the [United States] from any *point source* other than a vessel or other floating craft.” 33 U.S.C. § 1362(12) (emphases added). Pollutant, in turn, means “dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, *munitions*, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.” *Id.* § 1362(6) (emphasis added). And a “point source” is “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharged . . . .” *Id.* § 1362(14). CWA jurisdiction extends to “navigable waters,” a phrase defined as “the waters of the United States.” *Id.* § 1362(7). This includes tributaries to navigable waters. 40 C.F.R. § 120.2(1)(ii).

Ongoing violations of the CWA and NPDES permits are enforceable through the Act’s citizen suit provision. 33 U.S.C. § 1365(a), (f). This provision requires citizens to send a notice letter to the EPA, the state in which the alleged violation occurs, and to the alleged violator, before bringing suit. *Id.* § 1365(b). As required by the CWA, this letter provides notice of the violations that have occurred and continue to occur as a result of the Mountain Home AFB’s training exercises in southeastern Oregon. *See* 40 C.F.R. § 135.3(a).

### **VIOLATIONS OF THE CLEAN WATER ACT**

The Air Force is in violation of section 301(a) of the Clean Water Act, 33 U.S.C. § 1311(a), because chaff and flares discharged from aircraft during training missions are being discharged into waters of the United States in the Mountain Home AFB’s six Military Operations Areas, including the Owyhee North area which covers almost one million acres of land in southeastern Oregon. The Air Force states in its 2023 Final Environmental Impact Statement (“FEIS”) for the Mountain Home AFB Optimization proposal that the department uses chaff and flares to interfere with Air Traffic Control and “enemy” RADAR. FEIS at 3-161 to -162.<sup>1</sup> “Chaff consists of reflective, aluminum-coated glass fibers” and is “stored in canisters that contain millions of fibers [that are] dispensed from aircraft when a missile attack is imminent.” *Id.* at 3-161. The fibers create a “RADAR cloud” and then drop to the ground. *Id.*

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<sup>1</sup> U.S. Dep’t of the Air Force, *Final Environmental Impact Statement for Airspace Optimization for Readiness at Mountain Home Air Force Base, Idaho* (March 2023), <https://www.mountainhomeafbairspaceeis.com/index.aspx>.

The Air Force has acknowledged that “[c]haff fibers or residual matter from chaff and flares could collect on water surfaces.” Draft EIS at 2-40.<sup>2</sup> The FEIS claims that chaff and flares “are not considered toxic” and “would not affect ground or water quality.” FEIS at 2-39. The department asserts that the “probability of a substantial amount” of material being deposited “would be minuscule”—although the amount of chaff and flares permitted under the proposed action “would potentially increase over baseline amounts.” *Id.* at 2-40.

The Air Force indicates that the use of chaff is “covered” annually by a “Chaff Clearance Letter” that provides guidance from the Air Force and the Federal Aviation Administration. FEIS at 3-161. Nowhere in the FEIS does the Air Force indicate that it has ever sought or secured a CWA permit from the EPA or DEQ; the annual “Chaff Clearance Letter” cannot serve as an NPDES permit. ONDA has reviewed the most recent such letter provided to us, dated January 6, 2022, and it contains no indication of or reference to a CWA permit.

The Supreme Court has confirmed that the U.S. Navy’s “release of ordnance from aircraft or from ships into navigable waters is a discharge of pollutants” under the Act. *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 309 (1982). Since that time, other courts have held that coal and coal dust blown off the top of moving rail cars and into navigable waters amounted to a point source discharge, *Sierra Club v. BNSF Ry. Co.*, No. 2:13-cv-00967-JCC, ECF 337 (W.D. Wash. Oct. 25, 2016), spraying of pesticides from aircraft is a discharge from a point source, *Peconic Baykeeper, Inc. v. Suffolk Cnty.*, 600 F.3d 180, 188–89 (2d Cir. 2010), spraying of pollutants from helicopters into the air, which eventually landed on navigable waters, was a discharge from a point source, *No Spray Coal., Inc. v. City of New York*, No. 00 Civ. 5395(GBD), 2005 WL 1354041, \*5 (S.D.N.Y. June 8, 2005), and “aerial spraying of pesticide conducted by the Forest Service is point source pollution” and requires an NPDES permit. *League of Wilderness Defs./Blue Mtns. Biodiversity Proj. v. Forsgren*, 309 F.3d 1181, 1192–93 (9th Cir. 2002). The Air Force’s release of chaff and flares into navigable waters throughout the Owyhee region fits easily into the courts’ understanding of what constitutes a prohibited discharge of pollutants from a point source under the CWA.

Through public comments dated November 22, 2019, October 22, 2021, and April 3, 2023, ONDA raised this concern and informed the Air Force that the agency’s ongoing and proposed Mountain Home AFB training activities were damaging fish and wildlife habitat and water resources and were in violation of the CWA. Among other concerns, ONDA pointed out that the Air Force itself has identified both aluminum and copper as elements within chaff that could cause detrimental effects to aquatic species—not to mention potential impacts to humans and other wildlife—stating that:

sensitive aquatic species could be adversely affected by repeated, concentrated exposure to chaff deposition. If such an environment exists in an area proposed

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<sup>2</sup> U.S. Dep’t of the Air Force, *Draft Environmental Impact Statement for Airspace Optimization for Readiness at Mountain Home Air Force Base, Idaho* (July 2021), <https://www.mountainhomeafbairspaceeis.com/index.aspx>.



for chaff use, the presence of threatened or endangered aquatic species should be identified through consultation with the local office of the U.S. Fish and Wildlife Service and the state fish and game or fish and wildlife department. If protected aquatic species or their habitats are known to occur or could be in the area, the environmental assessment should include a quantification of the amount of copper that they might be exposed to and resulting concentrations that could be expected in the affected water bodies under the proposed action.

USAF (1997) at 163.<sup>3</sup> It is well established that copper, aluminum, and other metals can be toxic to bull trout, Lahontan cutthroat trout, redband and other native trout at very low levels. *See, e.g.,* Kiser *et al.* (2010) (bull trout and copper),<sup>4</sup> Bopp *et al.* (2008) (redband trout and copper),<sup>5</sup> Farag *et al.* (2011) (cutthroat trout and copper),<sup>6</sup> Woodward *et al.* (2011) (cutthroat trout and aluminum),<sup>7</sup> Book *et al.* (2019) (rainbow trout and silica).<sup>8</sup>

The Air Force also has observed that “[u]se of chaff over or immediately adjacent to highly sensitive areas such as Wilderness Areas, Wild and Scenic Rivers, National Parks and Monuments, and other pristine natural areas may be incompatible with the land use management objectives for those areas.” USAF (1997) at 3. Yet, the Air Force failed in both its 2021 DEIS and 2023 FEIS for Mountain Home AFB to adequately analyze the known and potential effects of chaff and flares on sensitive aquatic species and highly sensitive areas that occur in and around the Owyhee Canyonlands—an area that encompasses hundreds of thousands of acres of wilderness lands and almost 200 miles of protected rivers as part of the Owyhee Wild and Scenic

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<sup>3</sup> U.S. Air Force. 1997. Environmental Effects of Self-Protection Chaff and Flares. Headquarters Air Combat Command Langley Air Force Base, Virginia. Available at <https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB98110620.xhtml>.

<sup>4</sup> Kiser, T. *et al.* 2010. Impacts and Pathways of Mine Contaminants to Bull Trout (*Salvelinus confluentus*) in an Idaho Watershed. *Environmental Contamination and Toxicology* 59(2):301-11.

<sup>5</sup> Bopp, S.K. *et al.* 2008. Copper-induced oxidative stress in rainbow trout gill cells. *Aquatic Toxicology* 86(2): 197-204. <https://doi.org/10.1016/j.aquatox.2007.10.014>.

<sup>6</sup> Farag, A.M. 2011. Dietary Effects of Metals-Contaminated Invertebrates from the Coeur d'Alene River, Idaho, on Cutthroat Trout. *Transactions of the American Fisheries Society* 128(4): 578-592. [https://doi.org/10.1577/1548-8659\(1999\)128<0578:DEOMCI>2.0.CO;2](https://doi.org/10.1577/1548-8659(1999)128<0578:DEOMCI>2.0.CO;2).

<sup>7</sup> Woodward, D.F. *et al.* 2011. Sensitivity of Endemic Snake River Cutthroat Trout to Acidity and Elevated Aluminum. *Transactions of the American Fisheries Society* 118(6): 630-643. [https://doi.org/10.1577/1548-8659\(1989\)118<0630:SOESRC>2.3.CO;2](https://doi.org/10.1577/1548-8659(1989)118<0630:SOESRC>2.3.CO;2).

<sup>8</sup> Book, F. *et al.* 2019. Ecotoxicity screening of seven different types of commercial silica nanoparticles using cellular and organismic assays: Importance of surface and size. *NanoImpact* 13: 100-111. <https://doi.org/10.1016/j.impact.2019.01.001>.



Rivers system. All told, there are 438 miles of streams and about 4,500 surface acres of flatwater fisheries habitat in the Bureau of Land Management's 4.6 million-acre Southeastern Oregon Resource Management Plan area (which covers Mountain Home AFB's Owyhee North training area) alone.

Several sensitive fish species are found within this remarkable landscape, including Interior redband trout (*Oncorhynchus mykiss spp*), Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*), and bull trout (*Salvelinus confluentus*). Bull trout and Lahontan cutthroat trout are listed as threatened species under the Endangered Species Act, and redband trout are designated as a species of concern by the U.S. Department of the Interior and the state of Oregon. According to the Bureau of Land Management, there are at least 15 native fish species that occur in this area (not to mention amphibians and aquatic invertebrates, many of which also have various state and federal special status designations). If chaff or flares are released over the Owyhee or its tributaries and other waters within the Oregon portion of the training project area, there is a high likelihood that concerning levels of pollutants will enter the waterways that support these sensitive fish and other species. The steep, narrow canyons that many of these streams flow through will likely act as a funnel for clouds of chaff and flares, magnifying the concentration of pollutants that will enter the water.

In 2022, ONDA asked the Air Force, pursuant to the Freedom of Information Act, 5 U.S.C. § 552, *as amended*, to provide copies "of any NPDES or related permit(s) authorizing any discharge of pollutants associated with military aircraft training activities by the Mountain Home Air Force Base." In response, the agency produced five documents, all of which were associated with on-base waste and storm water treatment activities. We also checked with DEQ, who indicated that they have no record of any NPDES permit for Mountain Home AFB activities occurring in Oregon. To our knowledge, the Mountain Home AFB does not have, and has never had, a required permit for discharge of pollutants into navigable waters in Oregon.

The Air Force confirmed as much when, in response to this public concern, the agency claimed (incorrectly) in the 2023 FEIS that "military aircraft are not point sources under the CWA and the National Pollutant Discharge Elimination System does not apply. There are currently no requirements under the CWA that apply to military aircraft operations." FEIS at B-188 (also selectively quoting the definition of a point source as "pipes or man-made ditches"). This is incorrect as a matter of law.

In sum, the Air Force is violating section 301(a) of the CWA, 33 U.S.C. § 1311(a), by discharging chaff and similar materials to surface waters while conducting military training exercises from the Mountain Home AFB without an NPDES permit. These violations occur each and every day the Air Force releases chaff or similar materials during these military training exercises. ONDA provides notice that it intends to sue for such unlawful discharges in Oregon associated with training missions in or involving the Owyhee North area. This area includes, among others, hundreds of miles in the Owyhee Wild and Scenic Rivers system and its tributary streams.

**PERSONS GIVING NOTICE**

The name, address, and phone number of the person giving notice of intent to sue is:

Oregon Natural Desert Association  
50 SW Bond St., Ste. 4  
Bend, OR 97702  
541-330-2638

Counsel for the party(ies) giving notice is:

Peter M. Lacy  
Oregon Natural Desert Association  
2009 NE Alberta Street, Suite 207  
Portland, OR 97211  
503-525-0193 | [lacy@onda.org](mailto:lacy@onda.org)

**CONCLUSION**

It is ONDA's hope that this notice will make it unnecessary to pursue litigation concerning this issue. ONDA is prepared, however, to seek judicial intervention to address the department's failure to properly carry out its mandatory duties under the CWA. ONDA has a policy of pursuing negotiations whenever possible. This policy applies to all types of environmental disputes, including enforcement of the CWA. In keeping with this policy, we invite you to discuss with us your compliance with the CWA. Please direct any questions concerning this notice to Peter M. Lacy, lead counsel for the above party. We look forward to your response.

Sincerely,

s/ Peter M. Lacy

Peter M. ("Mac") Lacy, Senior Attorney  
Oregon Natural Desert Association

2009 NE Alberta St., Ste. 207  
Portland, OR 07211  
[lacy@onda.org](mailto:lacy@onda.org)

Cc: Ryan Houston, Executive Director  
Oregon Natural Desert Association  
[rhouston@onda.org](mailto:rhouston@onda.org)

Mark Salvo, Program Director  
Oregon Natural Desert Association  
[msalvo@onda.org](mailto:msalvo@onda.org)

**CERTIFICATE OF SERVICE**

I, Peter M. Lacy, declare under penalty of perjury of the laws of the United States that I am counsel for Oregon Natural Desert Association and that on April 10, 2023, I caused copies of the foregoing Notice of Violations and Intent to Sue Under the Clean Water Act to be served on the following by depositing them with the United States Postal Service, certified mail, return receipt requested, postage prepaid:

Secretary Lloyd J. Austin III  
U.S. Department of Defense  
1400 Defense Pentagon  
Washington, D.C. 20301-1400

Secretary Frank Kendall  
U.S. Department of the Air Force  
1690 Air Force Pentagon  
Washington, D.C. 20330-1670

Colonel Ernesto M. DiVittorio  
Wing Commander, 366th Fighter Wing  
Mountain Home Air Force Base  
1740 East Fairview Ave, PMB 20  
Meridian, Idaho 83642

Attorney General Merrick B. Garland  
U.S. Department of Justice  
950 Pennsylvania Avenue, N.W.  
Washington, D.C. 20530-0001

Administrator Michael S. Regan  
U.S. Environmental Protection Agency  
William Jefferson Clinton Building  
1200 Pennsylvania Ave., N.W.  
(Mail Code 1101A)  
Washington, D.C. 20460

Regional Administrator Casey Sixkiller  
U.S. Env'tl. Protection Agency, Region 10  
1200 Sixth Avenue, Suite 155  
Seattle, WA 98101

Director Lea Feldon  
Oregon Department of Environmental Quality  
700 NE Multnomah Street, Suite 600  
Portland, OR 97232-4100



# **EXHIBIT 2**

<b>Number</b>	<b>Stream Name</b>	<b>Approximate Number of Miles in the Paradise North Military Operations Area</b>
1	Antelope Creek	44.57
2	Barn Canyon	2.17
3	Battle Creek	6.14
4	Big Creek	4.59
5	Bobs Draw	3.86
6	Box Canyon	0.75
7	Brewster Reservoir	0.32
8	Brewster Reservoir No. 2	0.16
9	Bull Creek	5.97
10	Bull Creek	3.47
11	Cave Creek	4.83
12	Cavieta Creek	9.66
13	Cherry Creek	7.63
14	Chest Canyon	3.70
15	Chicken Springs Canyon	2.65
16	Chimney Creek	1.62
17	Chipmunk Creek	2.90
18	Corral Creek	8.46
19	Cottonwood Canyon	3.19
20	Coyote Creek	7.28
21	Coyote Creek	6.18
22	Currant Creek	3.36
23	Deer Creek	3.54
24	Deer Creek	5.62
25	Dry Canyon	6.66
26	Dry Creek	10.01
27	Dry Lakes	0.32
28	Field Creek	7.34
29	Field Creek	17.65
30	Flat Creek	2.19
31	Frenchman Creek	2.42
32	Gartin Reservoir	0.68
33	Goat Creek	4.15
34	Hansen Flat Creek	6.34
35	Hanson Canyon	4.66
36	Hanson Flat Creek	1.52
37	Indian Canyon	1.76
38	Indian Canyon	3.96
39	Jack Creek	11.07
40	Jackson Creek	2.60
41	Little Antelope Creek	25.81
42	Little Rattlesnake Creek	14.26
43	Little Spring Creek	2.06
44	Lone Tree Reservoir	0.26
45	Long Canyon	3.79
46	Long Canyon	1.87
47	Long Meadow Creek	6.44
48	Loveland Canyon	3.60
49	Massey Canyon	6.94

50	Middle Fork Jackson Creek	2.27
51	Middle Fork Owyhee River	13.40
52	Mud Flat Creek	10.54
53	North Fork Jackson Creek	2.03
54	North Fork Owyhee River	9.34
55	Oregon Lake Creek	6.14
56	Owyhee River	36.29
57	Peacock Creek	7.95
58	Pole Creek	8.23
59	Pole Creek	24.65
60	Porcupine Canyon	2.51
61	Rattlesnake Creek	21.82
62	Rock Creek	4.17
63	Schoolhouse Gulch	1.72
64	Seldom Reservoir	0.20
65	Sharon Creek	3.12
66	Shearing Corral Creek	9.87
67	Sheep Creek	0.44
68	Soldier Creek	3.00
69	Soldier Meadows Creek	5.46
70	South Fork Tenmile Creek	2.78
71	South Fork Toppin Creek	5.60
72	Squaw Creek	1.65
73	St. Martin Creek	3.56
74	Steel Canyon Creek	2.96
75	Steer Canyon	10.71
76	Sunflower Canyon	1.32
77	Tenmile Creek	16.18
78	Tent Creek	22.65
79	Toppin Creek	37.25
80	Trail Creek	7.99
81	Tunnel Canyon	4.05
82	Twin Lakes	0.25
83	Twin Lakes	0.15
84	Twin Springs Gorge	7.46
85	Twomile Creek	8.23
86	Upper Dry lake No 2	0.66
87	Varment Creek	6.24
88	Warm Spring Canyon	5.93
89	West Little Owyhee River	60.82
90	Whiskey Gulch	2.43
91	Whitehorse Creek	6.28
92	Wood Canyon	3.55
93	Woolhawk Canyon	4.79
94	unnamed	2.00
95	unnamed	2.92
96	unnamed	1.32
97	unnamed	0.96
98	unnamed	0.10
99	unnamed	4.11
100	unnamed	1.15
101	unnamed	1.53

102	unnamed	0.33
103	unnamed	3.16
104	unnamed	2.33
105	unnamed	1.13
106	unnamed	1.69
107	unnamed	2.89
108	unnamed	1.57
109	unnamed	2.22
110	unnamed	2.42
111	unnamed	1.23
112	unnamed	1.33
113	unnamed	2.85
114	unnamed	2.76
115	unnamed	3.14
116	unnamed	0.62
117	unnamed	1.51
118	unnamed	2.48
119	unnamed	4.30
120	unnamed	6.64
121	unnamed	1.38
122	unnamed	1.63
123	unnamed	0.95
124	unnamed	2.14
125	unnamed	1.04
126	unnamed	1.51
127	unnamed	0.78
128	unnamed	0.87
129	unnamed	1.28
130	unnamed	0.74
131	unnamed	5.08
132	unnamed	0.01
133	unnamed	2.07
134	unnamed	1.80
135	unnamed	2.64
136	unnamed	1.62
137	unnamed	0.04
138	unnamed	0.25
139	unnamed	3.75
140	unnamed	2.22
141	unnamed	1.03
142	unnamed	1.40
143	unnamed	0.58
144	unnamed	5.21
145	unnamed	1.13
146	unnamed	1.67
147	unnamed	1.31
148	unnamed	1.72
149	unnamed	1.89
150	unnamed	0.17
151	unnamed	2.76
152	unnamed	4.39
153	unnamed	1.97

154	unnamed	3.45
155	unnamed	0.69
156	unnamed	5.75
157	unnamed	1.89
158	unnamed	2.50
159	unnamed	2.80
160	unnamed	2.94
161	unnamed	6.71
162	unnamed	2.10
163	unnamed	6.45
164	unnamed	5.14
165	unnamed	2.92
166	unnamed	2.37
167	unnamed	1.90
168	unnamed	2.12
169	unnamed	1.99
170	unnamed	1.38
171	unnamed	1.54
172	unnamed	4.82
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174	unnamed	5.09
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181	unnamed	1.50
182	unnamed	4.16
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184	unnamed	2.75
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186	unnamed	2.14
187	unnamed	0.10
188	unnamed	1.51
189	unnamed	0.46
190	unnamed	5.00
191	unnamed	2.06
192	unnamed	2.34
193	unnamed	0.31
194	unnamed	0.20
195	unnamed	0.19
196	unnamed	0.28
197	unnamed	3.58
198	unnamed	0.90
199	unnamed	1.42
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206	unnamed	1.10
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217	unnamed	3.38
218	unnamed	3.00
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228	unnamed	3.54
229	unnamed	2.59
230	unnamed	1.05
231	unnamed	3.47
232	unnamed	2.13
233	unnamed	3.47
234	unnamed	1.45
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265	unnamed	2.55
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267	unnamed	1.88
268	unnamed	1.38
269	unnamed	1.44
270	unnamed	0.93
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288	unnamed	2.34
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302	unnamed	4.56
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305	unnamed	3.58
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307	unnamed	2.26
308	unnamed	1.58
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319	unnamed	15.72
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357	unnamed	2.43
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362	unnamed	1.94
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430	unnamed	2.41
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447	unnamed	4.10
448	unnamed	3.33
449	unnamed	2.64
450	unnamed	6.17
451	unnamed	2.74
452	unnamed	3.10
453	unnamed	2.31
454	unnamed	2.65
455	unnamed	2.02
456	unnamed	3.81
457	unnamed	1.84
458	unnamed	2.69
459	unnamed	2.93
460	unnamed	3.16
461	unnamed	2.89
462	unnamed	4.99
463	unnamed	3.62
464	unnamed	3.75
465	unnamed	4.34

466	unnamed	2.40
467	unnamed	1.65
468	unnamed	3.05
469	unnamed	1.98
470	unnamed	2.88
471	unnamed	1.42
472	unnamed	2.77
473	unnamed	2.24
474	unnamed	1.34
475	unnamed	1.45
476	unnamed	1.93
477	unnamed	1.91
478	unnamed	0.52
479	unnamed	3.00
480	unnamed	9.89
481	unnamed	4.42
482	unnamed	2.06
483	unnamed	6.41
484	unnamed	0.68
485	unnamed	2.32
486	unnamed	1.15
487	unnamed	2.37
488	unnamed	1.83
489	unnamed	2.92
490	unnamed	1.72
491	unnamed	5.98
492	unnamed	1.69
493	unnamed	1.79
494	unnamed	3.11
495	unnamed	2.35
496	unnamed	3.69
497	unnamed	2.05
498	unnamed	2.45
499	unnamed	1.26
500	unnamed	6.15
501	unnamed	1.59
502	unnamed	2.46
503	unnamed	3.19
504	unnamed	2.16
505	unnamed	2.27
506	unnamed	2.51
507	unnamed	6.77
508	unnamed	2.49
509	unnamed	1.18
510	unnamed	3.40
511	unnamed	2.49
512	unnamed	1.18
513	unnamed	1.10
514	unnamed	2.73
515	unnamed	1.30
516	unnamed	2.12
517	unnamed	2.51

518	unnamed	1.61
519	unnamed	2.52
520	unnamed	3.95
521	unnamed	2.03
522	unnamed	1.46
523	unnamed	12.70
524	unnamed	1.43
525	unnamed	4.14
526	unnamed	5.54
527	unnamed	2.54
528	unnamed	2.34
529	unnamed	1.10
530	unnamed	2.24
531	unnamed	1.15
532	unnamed	1.92
533	unnamed	1.58
534	unnamed	1.42
535	unnamed	2.59
536	unnamed	1.92
537	unnamed	1.49
538	unnamed	2.31
539	unnamed	3.57
540	unnamed	3.17
541	unnamed	2.96
542	unnamed	3.52
543	unnamed	1.89
544	unnamed	2.28
545	unnamed	2.57
546	unnamed	2.18
547	unnamed	1.86
548	unnamed	1.37
549	unnamed	1.24
550	unnamed	1.55
551	unnamed	1.23
552	unnamed	1.87
553	unnamed	2.64
554	unnamed	2.48
555	unnamed	3.26
556	unnamed	1.54
557	unnamed	2.33
558	unnamed	1.90
559	unnamed	2.02
560	unnamed	2.36
561	unnamed	1.10
562	unnamed	1.46
563	unnamed	0.23
564	unnamed	2.07
565	unnamed	2.30
566	unnamed	1.22
567	unnamed	1.23
568	unnamed	1.98
569	unnamed	2.43

570	unnamed	1.35
571	unnamed	1.81
572	unnamed	1.20
573	unnamed	0.81
574	unnamed	0.33
575	unnamed	3.91
576	unnamed	0.73
577	unnamed	1.80
578	unnamed	1.73
579	unnamed	4.52
580	unnamed	0.15
581	unnamed	0.76
582	unnamed	5.15
583	unnamed	2.75
584	unnamed	1.39
585	unnamed	8.91
586	unnamed	1.65
587	unnamed	1.86
588	unnamed	1.51
589	unnamed	1.41
590	unnamed	4.44
591	unnamed	2.05
592	unnamed	4.72
593	unnamed	3.29
594	unnamed	4.31
595	unnamed	4.09
596	unnamed	1.13
597	unnamed	2.84
598	unnamed	2.55
599	unnamed	1.70
600	unnamed	3.46
601	unnamed	3.59
602	unnamed	1.11
603	unnamed	0.98
604	unnamed	3.27